



FISCAL YEAR 2011 APPROPRIATIONS REQUEST

As submitted to the Subcommittee on Defense on April 9, 2010:

Item: Northeast Counterdrug Training Center (NCTC)

Request: \$3,500,000

Account: Drug Interdiction and Counterdrug Activities

Line: NA

PE: NA

Language: NA

Intended Recipient: Northeast Counterdrug Training Center

Address: Annville, PA

Purpose/Project Description: These requested funds would provide no-cost training to local, state and federal law enforcement professionals, community anti-drug coalitions, and DoD personnel. NCTC trains over 10,000 individuals from an 18-state area annually. NCTC's state-of-the-art Polygraph Center and High Risk Entry Facility also provide critical training to military units and other DOD personnel.

Item: CH-47

Request: Support the President's Budget

Account: Aircraft Procurement, Army

Line: 13, 14, 23

PE: NA

Language: NA

Intended Recipient: The Boeing Company

Location: Ridley Park, PA

Purpose/Project Description: Funding will continue fleet conversion of CH-47Ds to CH-47Fs and procure new CH-47 and MH-47 variants to support ongoing military operations.

Item: CV-22

Request: Support the President's Budget

Account: Aircraft Procurement, Air Force

Line: 19, 20

PE: NA

Language: NA

Intended Recipient: The Boeing Company

Location: Ridley Park, PA

Purpose/Project Description: The CV-22 is critical to the Air Force Special Operations Command's ability to penetrate heavily defended environments and insert/extract forces in a timely manner.

Item: MV-22

Request: Support the President's Budget

Account: Aircraft Procurement, Navy

Line: 9, 10

PE: NA

Language: NA

Intended Recipient: The Boeing Company

Location: Ridley Park, PA

Purpose/Project Description: The MV-22 is the replacement aircraft for aging Marine Corps CH-46 and CH-53D helicopters and is central to Marine Expeditionary Maneuver Warfare doctrine.

Item: Global Combat Support System

Request: Support the President's Budget

Account: Research and Development, Army

Line: 172

PE: 0303141A

Language: NA

Intended Recipient: SAP

Location: Newton Square, PA

Purpose/Project Description: GCSS-Army will replace 16 existing logistics automated systems with one fully-integrated enterprise management system that will significantly enhance interfaces among other Army and joint command and control systems.

Item: General Fund Enterprise Business System

Request: Support the President's Budget

Account: Other Procurement, Army

Line: 119

Language: NA

Intended Recipient: SAP

Location: Newton Square, PA

Purpose/Project Description: Funds will be used to modernize the Army's financial management system. The General Fund Enterprise Business System provides a core financial

enterprise resource planning solution that will be used to manage the Army's general fund, dramatically improve financial performance, standardize business processes and ensure the Army can meet future needs for combat operations and day-to-day financial management activities.

Item: Navy Enterprise Resource Planning
Request: Support the President's Budget
Account: Other Procurement, Navy
Line: 137
Language: NA
Intended Recipient: SAP
Location: Newton Square, PA
Purpose/Project Description: Navy ERP is an integrated mission support information technology system that transforms and standardizes how the Navy manages its people, money programs, equipment supplies and maintenance.

Item: Next Generation Protective Seat
Request: \$5,000,000
Account: Research and Development, Army
Line: 5
PE: 0602105A
Language: NA
Intended Recipient: Global Seating Systems LLC
Address: Exton, PA
Purpose/Project Description: The requested funding will develop a next-generation modular seat to address the safety of all soldiers in wheeled vehicles. Legacy seating systems on many current vehicles have been tested and shown to amplify IED/mine inputs and fail to meet the minimum Federal Motor Vehicle Safety Standards and Regulations required for passenger vehicles. Global Seating Systems has developed a family of protective seats that have been tested and approved by the Army and Marines. These seats are currently in production and being used on several of the Mine Resistant Ambush Protected vehicle platforms. This engineering effort will be a reduction in soldier injuries and death that often result from the shock forces generated into the cab of the vehicle during both the blast and the slam down phases that follow the ignition of an IED or from a crash / rollover.

Item: Multi-Frequency Meshed Battle-Cloud Network
Request: \$5,000,000
Account: Research and Development, Army
Line: 34
PE: 0603006A

Language: NA

Intended Recipient: Rajant Corporation

Address: Malvern, PA

Purpose/Project Description: The requested funds will be used to advance the basic functionality of the former Portable Mobile Emergency Broadband System (PMEBS) technology and develop new capabilities urgently needed to support a broad range of important uses for the military. These include direct integration with sensors used for IED, chemical, biological and nuclear warning systems; support for rapid, in-the-field reconfiguration to avoid interference and security compromises; and integration with legacy communication systems to enable a practical, phased transition from older, less capable systems.

Item: Advanced Ballistic Testing of Lithia Alumina Silicate (LAS) and Disilicate Glass Ceramic Armor

Request: \$5,000,000

Account: Research and Development, Army

Line: 5

PE: 0602105A

Language: NA

Intended Recipient: SCHOTT North America

Address: Duryea, PA

Purpose/Project Description: Requested funds would be used to test materials for lighter weight and more survivable armor. This project would explore and optimize different material formulations and armor designs to facilitate: lighter weight; improved ballistic performance; reduced thickness; larger conformal plate sizes; reduced crazing upon impact; greater resistance to environmental conditions; and optimized transmissivity.

Item: Vectored Thrust Ducted Propeller Compound Helicopter (VTDP)

Request: \$5,000,000

Account: Research and Development, Army

Line: 31

PE: 0603003A

Language: NA

Intended Recipient: Piasecki Aircraft Corp.

Address: Essington, PA

Purpose/Project Description: This funding will be used to demonstrate the VTDP technology's potential to increase speed, range, and survivability. This technology, once matured, has potential for insertion onto current and future DoD rotorcraft to refine performance and reduce life cycle costs. This phase of the VTDP project will focus on flight control characteristics - yaw axis control system, wing incidence geometry, drag reduction modifications, and analysis of acoustic characteristics.

Item: Ballistic Armor Research
Request: \$5,000,000
Account: Research and Development, Army
Line: 5
PE: 0602105A
Language: NA
Intended Recipient: Air Products and Chemicals
Address: Allentown, PA
Purpose/Project Description: The requested funding would be used to develop multilayer composite technology, which is comprised of ceramics, metals, and polymers for improved body armor and vehicle armor.

Item: Mobile Firefighter Training Initiative
Request: \$5,000,000
Account: Other Procurement, Navy
Line: 143
PE: NA
Language: NA
Intended Recipient: Thermo Fisher Scientific
Address: Pittsburgh, PA
Purpose/Project Description: The requested funding would be used to develop an innovative firefighter training demonstration project utilizing mobile fire simulators on Navy bases.

Item: Cyber Mission Interoperability Toolkit
Request: \$4,000,000
Account: Research and Development, Air Force
Line: 171
PE: 0303141F
Language: NA
Intended Recipient: Accenture National Security Services
Address: King of Prussia, PA
Purpose/Project Description: Requested funds will be used to provide the Air Force with systems that focus on mission-oriented capability packages – providing horizontal information sharing capability, enabling trusted information sharing, and enable the rapid production of next generation Cyber Tasking Orders through the implementation of an integrated command and control capability that will ensure communication across multiple domains and commands.

Item: Military Protective Coatings Initiative

Request: \$3,900,000

Account: Research and Development, Navy

Line: 221

PE: 0708011N

Language: NA

Intended Recipient: Morgan Advanced Technical Ceramics

Address: Allentown, PA

Purpose/Project Description: Requested funds will be used to develop chemical vapor deposition chambers to enable application of novel carbon coatings to DoD physical assets to reduce wear and increase longevity.

Item: Integrated Combat System for Special Operations Craft

Request: \$4,000,000

Account: Procurement, Defense Wide

Line: 79

PE: NA

Language: NA

Intended Recipient: Trident Systems, Inc.

Address: Uniontown, PA

Purpose/Project Description: Requested funds will be used to integrate communications systems aboard the Special Operations Craft Riverine (SOCR) to improve situational awareness, thus increasing survivability and effectiveness.

Item: Carbon Nanotube Technology

Request: \$3,500,000

Account: Research and Development, Navy

Line: 106

PE: 0604501N

Language: NA

Intended Recipient: Tyco Electronics

Address: Middletown, PA

Purpose/Project Description: Requested funds will be used to expedite the development of the application of Carbon Nanotube Technology (CNT) into wire and cable applications to reduce total weight in military airborne platforms, thus reducing weight and increasing aircraft range and loiter time.

Item: Integrated Flexible Electronics

Request: \$2,500,000

Account: Research and Development, Army

Line: 2
PE: 0601102A
Language: NA
Intended Recipient: Plextronics
Address: Pittsburgh, PA

Purpose/Project Description: The funding would be used to develop new materials and technology for flexible electronics and to enable the adoption of printed electronics by the military. Plextronics, via an ongoing ARRA program with the Army Research Laboratory (ARL) and other funding, is developing flexible Organic Photovoltaic (OPV) technology. The output of the ARRA program will be a demonstrator unit comprising of a flexible solar cell powering a flexible electrophoretic display (EPD) which will provide a rugged, flexible display for DoD use.

Item: Universal Electro-optic Soldier Sensor Platform for IED Detection
Request: \$5,000,000
Account: Research and Development, Army
Line: 6
PE: 0602120A
Language: NA

Intended Recipient: Clear Align
Address: Eagleville, PA
Purpose/Project Description: Requested funds would be used to develop and deploy the Miniature Soldier Sensor Platform, a simple first line of defense for close range sensing of IEDs. The cost per fielded unit is anticipated to be a few hundred of dollars compared to existing devices at tens to hundreds of thousands of dollars.

Item: Large Caliber Metal Parts Upgrade
Request: \$3,200,000
Account: Research and Development, Army
Line: 149
PE: 0605805A
Language: NA

Intended Recipient: Medico Industries, Inc.
Address: Wilkes-Barre, PA

Purpose/Project Description: Funding will be used to assess production base capabilities and needs over the acquisition life cycle of various munitions, and then extend previous, medium caliber efforts to establish new manufacturing science and techniques for large caliber projectiles, warheads, cartridge cases and other metal parts. This effort will support development of the latest manufacturing methods, including rapid prototyping, raw material processing,

forming and shaping, surface treatments, heat treatments, metal removal and finishing, to rapidly deliver new munitions to the war fighter.

Item: Advanced Aircraft Maintenance Technologies
Request: \$3,100,000
Account: Research and Development, Air Force
Line: 15
PE: 0603112F
Language: NA
Intended Recipient: PPG Industries
Address: Pittsburgh, PA
Purpose/Project Description: This collaborative program would seek to develop next generation coatings and sealants to further reduce maintenance time and costs while delivering superior performance and functionality aboard next-generation aircraft.

Item: Advanced Sensor Data Integration for Space Superiority
Request: \$5,000,000
Account: Research and Development, Air Force
Line: 36
PE: 0603438F
Language: NA
Intended Recipient: Analytical Graphics
Address: Exton, PA
Purpose/Project Description: The Advanced Sensor Data Integration (ASDI) for Space Superiority project will leverage existing commercial software tool kits to provide rapid processing of multiple sensor data sources to predict, identify, analyze, visualize and react to events that threaten U.S. space assets, including satellite collision, space debris, anti-satellite weapons, and satellite jamming. ASDI will use existing and future sensors across the Department of Defense to provide a unified, robust space situational awareness foundation.

Item: Navy Production Capacity Improvement Project at Lehigh Heavy Forge
Request: \$4,000,000
Account: Defense Production Act Purchases
Line: 1
SA: NA
Language: NA
Intended Recipient: Lehigh Heavy Forge Corporation
Address: Bethlehem, PA
Purpose/Project Description: Requested funds will be used to increase Lehigh Heavy Forge's capacity to meet the Navy's demand for specific forged components. Lehigh Heavy

Forge is the only domestic producer with the capability and expertise to produce the large, complex forgings required for the Nuclear Powered Navy. The Navy depends on Lehigh Heavy Forge for nearly 100 percent of the ship shafts used by its surface and sub-surface combat vessels.

Item: Ammunition Production Base Support

Request: \$5,000,000

Account: Procurement of Ammunition, Army

Line: 37

PE: NA

Language: NA

Intended Recipient: General Dynamics Ordnance and Tactical Systems Scranton Operations

Address: Scranton, PA

Purpose/Project Description: The purpose of this funding would be for the establishment, augmentation and improvement of production capability for items procured under the ammunition appropriations to include modernization of electrical systems, production control, computer systems and infrastructure. Scranton AAP is a single source for a number of critical ammunition products. Upgrades are necessary to maintain production requirements for war reserve and training ammunition that have resulted from Overseas Contingency Operations.

Item: Joint Strike Fighter Authentic Tactical Fighting System

Request: \$5,000,000

Account: Research and Development, Air Force

Line: 20

PE: 0603231F

Language: NA

Intended Recipient: Environmental Tectonics Corporation

Address: Southampton, PA

Purpose/Project Description: The requested funding will be used to develop and support execution of the Test & Evaluation of the JSF TACModule in the Authentic Tactical Fighting System (ATFS-400) in coordination with and under the oversight of the U. S. Air Force's 711 Human Performance Wing/Warfighter Readiness Research Division.

Item: Eye-safe Standoff Fusion Detection of CBE Threats

Request: \$4,000,000

Account: Research and Development, Army

Line: 14

PE: 0602618A

Language: NA

Intended Recipient: ChemImage Corporation

Address: Pittsburgh, PA

Purpose/Project Description: The requested funding will be used to enhance the capabilities of the Eye-Safe Standoff Fusion Detection of Chemical, Biological and Explosive (CBE) threats by enabling detection of CBE hazards at longer distances from a convoy or moving group of soldiers, thus allowing more reaction time. The project will integrate a Gen III sensor onto the robotic platform and will then conduct multiple field trials.

Item: CH-47 Active Vibration Control System

Request: \$5,000,000

Account: Research and Development, Army

Line: 8

PE: 0602211A

Language: NA

Intended Recipient: LORD Corporation

Address: Erie, PA

Purpose/Project Description: Funding will be used to complete the operational test and evaluation of the OMNI Active Vibration Control System (AVCS) on Boeing CH-47 Chinook cargo helicopters. OMNI-AVCS will reduce vibration continuously in-flight, while significantly reducing weight, and increasing helicopter payload and range. The system also reduces operational costs due to decreased metal fatigue.

Item: Ceramic Membrane Battery System

Request: \$3,000,000

Account: Research and Development, Army

Line: 18

PE: 0602705A

Language: NA

Intended Recipient: MaxPower, Inc

Address: Harleysville, PA

Purpose/Project Description: The funding will be used to develop a ceramic membrane for a lithium air battery system that has 10 times the energy density of currently fielded batteries, is cost effective and is safe in high temperature desert environments. The result will be a battery that provides the war fighter with a high-power, high-energy battery that is superior in its reliability and significantly lighter than currently fielded battery systems.

Item: EQUATE (Ensemble of Quartz Oscillators Adapting to the Environment)

Request: \$5,000,000

Account: Research and Development, Army

Line: 18

PE: 0602705A

Language: NA

Intended Recipient: Bliley Technologies

Project Location: Erie, Pennsylvania

Project Description: Requested funds will be used to develop EQUATE technology to provide the warfighter with precise time and frequency, position, velocity, acceleration, local vertical and orientation in a denied-GPS field environment (including building interiors, underground, and in forestation).

Item: Dual Stage Variable Weight Energy Absorbing Troop Seat

Request: \$5,000,000

Account: Research and Development, Army

Line: 5

PE: 0602105A

Language: NA

Intended Recipient: ARCCA, Incorporated

Address: Penns Park, PA

Purpose/Project Description: The requested funding will be used to develop blast resistant seating to protect the occupants of ground vehicles from the forces generated by IED blasts and the resulting collisions which often create a bottoming out condition. The Dual Stage Variable Energy Absorber (DSVEA) is an advanced approach to dealing with the multiple shock events that are prevalent during today's warfare.

Item: Advanced Power Processor

Request: \$2,500,000

Account: Research and Development, Army

Line: 18

PE: 0602705A

Language: NA

Intended Recipient: Silicon Power Corporation

Address: Malvern, PA

Purpose/Project Description: This funding will be used to produce low cost, highly reliable advanced military power processors to meet the substantial power and reliability requirements of modern electronic defense systems. This project meets ARL and ARDEC requirements to supply constant and efficient power to systems such as electronic armor and electromagnetic guns.

Item: NAVMAR Unmanned Air Vehicle

Request: \$2,500,000

Account: Research and Development, Defense-wide

Line: 26

PE: 0603122D8Z

Language: NA

Intended Recipient: NAVMAR Applied Sciences Corporation

Address: Warminster, PA

Purpose/Project Description: The requested funding will be used to upgrade low-cost UAVs to accommodate size, weight, and power requirements associated with advance sensor, communications, electronic warfare and guidance systems in accordance with the DoD Unmanned Systems Roadmap.

Item: Ground-Modular Advanced Combat Helmet (G-MACH)

Request: \$4,000,000

Account: Research and Development, Army

Line: 29

PE: 0603001A

Language: NA

Intended Recipient: Gentex

Address: Carbondale, PA

Purpose/Project Description: The requested funding will be used to develop a single, fully integrated, mission capable helmet for the mounted soldier community that will ultimately help save lives by upgrading the oldest helmet platform used in the Army. Improvements would include upgradable ballistic protection, modular chem/bio, hearing, face and eye protection.

Item: All Terrain Lifter Army System (ATLAS) II

Request: \$5,000,000

Account: Other Procurement, Army

Line: 177

PE: NA

Language: NA

Intended Recipient: JLG Industries, Inc.

Address: McConnellsburg, PA

Purpose/Project Description: The requested funds will be used to procure additional units of the JLG All Terrain Lifter Army System (ATLAS) II, which is the leading telehandler on the market today. The ATLAS II is designed to reach into trucks or shipping containers, lift loads over obstacles, and pick up loads from both above and below grade, and operate on rough terrain.

Item: Engineered Materials & Manufacturing Technologies for Defense and Industry

Request: \$3,500,000

Account: Research and Development, Army

Line: 17

PE: 0602624A

Language: NA

Intended Recipient: Lehigh University

Address: Bethlehem, PA

Purpose/Project Description: The requested funding would be used to improve large caliber armaments by developing manufacturing technologies and novel manufacturing processes to produce engineered materials, such as titanium alloys and metal matrix composites. The resulting improved life cycles and/or weight reduction that will also benefit a wide range of hardware such as military vehicles and soldier-portable equipment.

Item: Navy Production Capacity Improvement Project at ArcelorMittal Steelton Facility

Request: \$4,000,000

Account: Defense Production Act Purchases

BA: 1

SA: NA

Language: NA

Intended Recipient: ArcelorMittal

Address: Steelton, PA

Purpose/Project Description: Requested funds will be used to increase Lehigh Heavy Forge capacity to meet the Navy's demand for specific forged components. ArcelorMittal provides all of the steel ingots used by Lehigh Heavy Forge. The Navy depends on Lehigh Heavy Forge for nearly 100 percent of the ship shafts used by its surface and sub-surface combat vessels.

Item: Combat Medic Training

Request: \$2,693,458

Account: Research and Development, Army

Line: 38

PE: 0603015A

Language: NA

Intended Recipient: CHI Systems, Inc.

Address: Fort Washington, PA

Purpose/Project Description: The requested funding will be used to finalize the HapMed Combat Medic Trainer training elements and for validating its components including arm tourniquet, leg tourniquet, needle chest decompression, and cricothyrotomy trainers. Additional funds are needed for FY11 to finalize the tourniquet trainer based on findings from field trials in FY10, and mature and validate the two remaining devices (training needle chest decompression and cricothyrotomy).

Item: Navy Special Warfare Performance and Injury Prevention Program
Request: \$2,850,000
Account: Research and Development, Navy
Line: 22
PE: 0603729N
Language: NA
Intended Recipient: University of Pittsburgh, School Health and Rehabilitative Sciences
Address: Pittsburgh, PA
Purpose/Project Description: The requested funds will be used to build on the success of the existing Injury Prevention and Performance Enhancement initiatives with the 101st Airborne/Air Assault Division and Fort Campbell and establish a related program for Navy Special Warfare Command.

Item: Advanced Regenerative Medicine Therapies for Combat Injuries (Phase VI)
Request: \$4,000,000
Account: Research and Development, Army
Line: 30
PE: 0603002A
Language: NA

Intended Recipient: Pittsburgh Tissue Engineering Initiative
Address: Pittsburgh, PA
Purpose/Project Description: The Advanced Regenerative Medicine VI Program continues to address critical needs of service members with traumatic injuries using an array of regenerative medicine and tissue engineering technologies to restore lost tissue and function. This 6th phase of the program will continue to focus on the musculoskeletal system and how to enhance biological processes which can assist in healing and control those that damage outcomes.

Item: AELED EC-130J Integration
Request: \$4,500,000
Account: Research and Development, Defense Wide
Line: 252
PE: 1160403BB
Language: NA
Intended Recipient: Nokomis, Inc.
Address: Charleroi, PA
Purpose/Project Description: Requested funds would be used to support ongoing efforts to integrate counter IED sensors and defeat mechanisms into EC-130J aircraft. Nokomis' Advanced Electromagnetic Location of Electronic Devices (AELED) technology, developed over several years for IED/WMD trigger detection, provides unique opportunities for IED detection and WMD counterproliferation activities. AELED technology detects, identifies and

geolocates electronic trigger devices rapidly, thereby providing an effective countermeasure against IEDs.

Item: OBERON Data Distribution System

Request: \$3,550,000

Account: Other Procurement, Army

Line: 186

PE: NA

Language: NA

Intended Recipient: Sechan Electronics

Address: Lititz, PA

Purpose/Project Description: Requested funds will be used to procure and install 50 OBERON systems in MRAP vehicles. The OBERON is an open architecture “digital backbone” for electronic devices that will provide soldiers with better overall situational awareness decreasing their mission time by reducing their threat exposure. The OBERON system will reduce weight, space and power demands by eliminating the need for redundant processors, laptops and excess cabling.

Item: Self Powered Prosthetic Limb Technology

Request: \$3,000,000

Account: Research and Development, Army

Line: 28

PE: 0602787A

Language: NA

Intended Recipient: KCF Technologies

Address: State College, PA

Purpose/Project Description: Funding will be used to further develop an energy harvesting device as a component in a lower extremity prosthetic limb. The energy harvester, integrated into the shin of the prosthetic leg, captures and stores energy during normal activities such as walking and running. This captured energy is regulated and stored to automatically recharge the batteries in the leg, reducing the frequency of battery charging.

Item: Recombinant Universal/Seasonal Vaccine for Influenza

Request: \$4,000,000

Account: Research and Development, Army

Line: 28

PE: 0602787A

Language: NA

Intended Recipient: Vital Probes, Inc.

Address: Mayfield, PA

Purpose/Project Description: The requested funding will be used to develop a novel and rapid response vaccine system for emerging pandemic strains of the influenza virus. Vital Probes, Inc. has developed a vaccine consisting of a protein adjuvant that induces an immune response to conserved universal influenza components of the hemagglutinin (HA) and matrix (M2e) proteins as well as full length HA. Vaccine production in bacteria yields more material in significantly less time as compared to present methods. These vaccines have been produced in the bacterium E. coli, were injected into mice, and stimulated a robust immune response.

Item: Synthetic Diamond for Electro-Optical and Microwave Applications

Request: \$4,000,000

Account: Research and Development, Air Force

Line: 4

PE: 0602102F

Language: NA

Intended Recipient: II-VI Incorporated

Address: Saxonburg, PA

Purpose/Project Description: The requested funding will be used to accelerate the development of advanced and lower cost synthetic diamond materials for a variety of defense-related infrared sensors, directed energy windows and high-speed high-frequency radiation-hardened electronics in anticipation of the Air Force's need for High-Power Microwave transmitters.

Item: Flight Motion Simulation Advanced Technologies

Request: \$2,000,000

Account: Research and Development, Army

Line: 44

PE: 0603313A

Language: NA

Intended Recipient: Acutronic USA, Inc.

Address: Pittsburgh, PA

Purpose/Project Description: The requested funding will be used for development of a composite structure Hardware-in-the-Loop (HWIL) guided weapons system flight motion simulator. This new composite, three-axis flight table prototype will enable more accurate and efficient testing of small rockets, precision guided munitions, seeker units, guided missiles and life cycle testing for weapon system components and/or weapons subsystems at a lower cost.

Item: Material Additive to Improve Diesel Engine Efficiency

Request: \$3,000,000

Account: Research and Development, Army

Line: 5

PE: 0602105A
Language: NA
Intended Recipient: American Clean Energy Systems
Address: Finleyville, PA
Purpose/Project Description: Funding will be used for further research and development of a diesel fuel catalyst to increase fuel efficiency, reduce emissions, and prolong engine life.

Item: Post Exchange
Request: \$6,000,000
Account: Operations and Maintenance, Defense Wide
BA: 04
SA: 240
Language: NA

Intended Recipient: Army Air Force Exchange Services
Project Location: Coraopolis, Pennsylvania
Project Description: Requested funds are to be used to build a Post Exchange on Pittsburgh International Airport Property. The facility will provide Post Exchange services to the eligible active military and veterans of Pennsylvania, West Virginia, Ohio, and Maryland. The Post Exchange will continue to provide the military and their families with discounted retail items, along with additional Morale Welfare Recreational (MWR) services. The Post Exchange will compliment the already approved new Commissary on the airport property. The establishment of both facilities will result in the military having access to a full range of necessary services.

Item: Hardmetal Epidemiology Study
Request: \$5,000,000
Account: Research and Development, Army
Line: 5
PE: 0602105A
Language: NA
Intended Recipient: University of Pittsburgh Department of Biostatistics
Address: Pittsburgh, PA
Purpose/Project Description: Funding will be used for an epidemiological study to determine the potential health impacts from workplace exposures to hardmetal powders, such as tungsten/cobalt alloy powders, which correctly play an integral role in the manufacturing chain.

Item: Hypothermia and Regenerative Treatments for Neurotrauma
Request: \$4,000,000
Account: Research and Development, Army
Line: 28
PE: 0602787A

Language: NA

Intended Recipient: The Miami Project to Cure Paralysis

Address: Miami, FL

Purpose/Project Description: The requested funding will be used to develop neuroprotective treatments which can be carried by mobile medical units and will reduce the secondary damage caused by the injury. These new treatments are essential to the military's goal of reducing the number of deaths and significantly reducing the severity of the soldier's overall injury.

Item: RAND Project Air Force

Request: \$2,350,000

Account: Research and Development, Air Force

Line: 95

PE: 0605101F

Language: NA

Intended Recipient: RAND Corporation

Address: Pittsburgh, PA

Purpose/Project Description: The requested funding would be used to restore RAND's funding to previous year levels. Project Air Force's recommendations have resulted in billions of dollars in cost savings, and have provided a valuable resource to the Air Force and Congress on numerous high-priority programs. A reduction of this size would result in less research, and possible elimination of entire research streams such as strategy and doctrine, military logistics, force development and technology, or manpower and training.

Item: Leishmaniasis Drug Discovery

Request: \$2,350,000

Account: Research and Development, Army

Line: 30

PE: 0603002A

Language: NA

Intended Recipient: University of Pittsburgh Drug Discovery Institute

Address: Pittsburgh, PA

Purpose/Project Description: The requested funding will support the University of Pittsburgh's Drug Discovery Institute to develop a treatment for leishmaniasis to benefit the warfighters who are contracting this potentially lethal disease during their deployments in Iraq and Afghanistan.

Item: Fire Control for Surface Ship Torpedo Defense, Anti-Torpedo Torpedo Defensive System (ATTDS)

Request: \$4,000,000

Account: Research and Development, Navy

Line: 33

PE: 0603506N

Intended Recipient: Penn State University Applied Research Lab

Address: University Park, PA

Purpose/Project Description: Requested funds will be used to design and build a fire control system suitable for integration within the developing Anti-Torpedo Torpedo Defensive System (ATTDS) for High Value Surface Ships that will provide the launch command orders for deployment of the ATT. The ATT is already being developed by ARL Penn State and the Laboratory has extensive experience in the design of fire control systems through development of fire control components to provide launch orders for the prototype ATT trials. These test events involved firing of ATT-like torpedoes on instrumented test ranges during ATT development as well as ONR torpedo firings to develop advanced ATT technologies. The Navy program office is expected to fund the following year's ship integration and in-water testing in conjunction with the ATTDS program to provide an ATTDS/ATT capability in fiscal year 2017.

Item: Advanced Cockpit Displays Design Facility

Request: \$4,000,000

Account: Research and Development, Navy

Line: 27

PE: 0603216N

Language: NA

Intended Recipient: L3-ADCCF

Project Location: Horsham, Pennsylvania

Project Description: Requested funds will be used to develop a facility to study pilot performance issues using realistic, relevant mission scenarios. The near-term program benefactor of this initiative is the Navy, Marine Corps, and Air Force variants of the Joint Strike Fighter (JSF). The JSF's helmet-mounted display (HMD) is the primary flight instrument, (thus, leaving the cockpit without the heads-up display). This HMD application is the first attempt to fully implement the technology on a developmental tactical aircraft. The additional JSF attributes of an expanded pilot population (i.e. male/female population across 3-98% anthropometry) on a single-seat, single engine aircraft introduces significant risk. The Advanced Cockpit Displays Design Facility will serve to mitigate risk during development and pilot training during JSF flight evaluations.

Item: Ejection Seat Study for the B-52H

Request: \$1,200,000

Account: Research and Development, Air Force

Line: 77

PE: 0604706F

Language: NA

Intended Recipient: Martin Baker USA

Project Location: Johnstown, Pennsylvania

Project Description: Requested funds will be used to conduct a study to improve the ejection seats in the B-52H aircraft.

Item: Robotic Sensors for Littoral Zones

Request: \$3,000,000

Account: Research and Development, Navy

Line: 11

PE: 0602435N

Language: NA

Intended Recipient: Lafayette College

Project Location: Easton, Pennsylvania

Project Description: Requested funds will be used to develop interoperable robotic systems to conduct surveillance and reconnaissance missions in littoral zones.

Item: Unmanned Ground Vehicle Mobility for Complex Urban Environments

Request: \$3,000,000

Account: Research and Development, Navy

Line: 11

PE: 0602435N

Language: NA

Intended Recipient: Bucknell University

Project Location: Lewisburg, Pennsylvania

Project Description: Requested funds will be used to design and test a prototype bipedal robot with advanced walking capabilities capable of operating in complex urban combat zones.

Item: Hybrid Standoff Sensor

Request: \$3,000,000

Account: Research and Development, Defense Wide

Line: 173

PE: 0305400D8Z

Language: NA

Intended Recipient: Wavefront Research, Inc.

Project Location: Bethlehem, Pennsylvania

Project Description: Requested funds will be used to design and develop a sensor system that combines active (laser-based) and passive (hyperspectral) sensor technologies into a single hybrid system that can detect and identify chemical and biological threats at longer standoff distances and thus save the lives of soldiers and innocent civilians.

Item: Indoor Personnel Locating and Tracking System

Request: \$3,000,000

Account: Research and Development, Air Force

Line: 4

PE: 0602102F

Language: NA

Intended Recipient: Mine Safety Appliances

Address: Pittsburgh, PA

Purpose/Project Description: The requested funding would be applied to complete the development of an indoor location and tracking system, which has been identified as the number one priority of the IAB (Inter-Agency Board) due to the life-saving value across numerous military and first responder organizations. An Indoor Personnel Location and Tracking System would specifically benefit U.S. Air Force firefighters, Special Forces operators, law enforcement agencies and first responders by enabling incident commanders to view the real-time location and movement of personnel inside a building during tactical operations, such as structural firefighting or hostage rescue scenarios.

Item: Next Generation Naval DC Protection

Request: \$1,500,000

Account: Research and Development, Navy

Line: 35

PE: 0603513N

Language: NA

Intended Recipient: Eaton Corp.

Address: Pittsburgh, PA

Purpose/Project Description: The requested funding will be used to develop proof of concept, analysis, design, prototype and evaluation of a COTS DC circuit breaker family that is compatible with present and future Navy power distribution system requirements, but a half the weight and volume of today's solutions. Parallel commercial applications for the family of circuit breakers in renewable/alternative energy will maintain affordability.

Item: High Energy Density Rechargeable Lithium Battery

Request: \$4,150,000

Account: Research and Development, Army

Line: 18

PE: 0602705A

Language: NA

Intended Recipient: LithChem Energy Co.

Address: Folcroft, PA

Purpose/Project Description: The requested funds will be used to deliver a lower cost advanced battery using existing technologies to reduce significantly the warfighter's battery load by increasing battery life.

Item: SLEUTH Tungsten Heavy Alloy Penetrator and Airburst Development

Request: \$4,000,000

Account: Research and Development, Army

Line: 17

PE: 0602624A

Language: NA

Intended Recipient: Global Tungsten and Powders Corp.

Address: Towanda, PA

Purpose/Project Description: The requested funding will be used to develop a non-cobalt containing tungsten alloy that improves penetration capability and behind-armor effects of kinetic energy penetrators. Funding will also improve the stability and lethality of medium caliber grenade and airburst munitions through the use of tungsten based materials which do not contain cobalt.

Item: National Center for Defense Manufacturing and Machining

Request: \$2,500,000

Account: Research and Development, Army

Line: 185

PE: 0708045A

Language: NA

Intended Recipient: National Center for Defense Manufacturing and Machining

Address: Latrobe, PA

Purpose/Project Description: Funding would be used to link specialty manufacturers to the DoD to fulfill unique defense applications.

Item: Conventional Ammunition Warfare Capabilities Improvement

Request: \$3,500,000

Account: Research and Development, Navy

Line: 50

PE: 0603609N

Language: NA

Intended Recipient: Oto Melara North America Inc.

Address: Lester, PA

Purpose/Project Description: Funding will support naval guns advanced-technology ammunition for compatibility testing, demonstration firings, and Weapons System Explosive Safety Review Board (WSESRB) qualification tests. The warfare capabilities improvement offered by this advanced technology ammunition supports U.S. Navy missions as defined in the Quadrennial Defense Review.

Item: Equipping Strategy Software

Request: \$2,500,000

Account: Operation & Maintenance, Army

BA: 04

SA: 423

Language: NA

Intended Recipient: ProModel Corporation

Address: Allentown, PA

Purpose/Project Description: The purpose of this funding is to provide the Army Material Command with sophisticated software which will model short and long range logistics strategies and identify problem areas and inefficiencies. The ability to test new equipping strategies in a virtual environment mitigates the risk and cost associated with the traditional, real-world testing.

Item: Next Generation Communications System

Request: \$3,400,000

Account: Research and Development, Army

Line: 19

PE: 0602709A

Language: NA

Intended Recipient: Accipiter Systems, Inc.

Address: Wexford, PA

Purpose/Project Description: This funding would develop a next-generation, scalable communications system for the warfighter with a significant reduction in size, weight and power compared to traditional systems. The project involves the creation of a novel computer networking architecture and related software protocols that offer significant increases in bandwidth usage from existing fiber optics. This will be achieved by using multiple wavelengths for simultaneous transmission of data from multiple sources to multiple destinations on a single optical fiber.

Item: Blood Safety and Decontamination Technology

Request: \$3,200,000

Account: Research and Development, Army

Line: 30

PE: 0603002A

Language: NA

Intended Recipient: Cerus Corporation

Address: Philadelphia, PA

Purpose/Project Description: The requested funding would be used to develop a prototype red cell processing device to inactivate transfusion-transmitted infectious pathogens in blood prepared for transfusion of wounded military personnel. This technology improves blood

availability for care of military personnel and their families and prevents transmission of new infectious agents within military blood donor populations especially during deployments.

Item: Ground Systems Reliability & Occupant Protection Laboratory (GSROPL) Multi-

Axial Simulation Table (MAST)

Request: \$3,250,000

Account: Research and Development, Army

Line: 33

PE: 0603005A

Language: NA

Intended Recipient: Bosch Rexroth Corporation

Address: Bethlehem, PA

Purpose/Project Description: The requested funding would be used to develop a multi-axial simulation table that could rapidly test critical vehicle subsystems/components, such as armor, engines, frames, seats and ground robotics, up to 2,000 lbs to verify durability and reliability characteristics, prior to full vehicle integration. The MAST will further be able to replicate force inputs indicative of theater operations to quickly identify current equipment failure modes for corrective action. The MAST will be able to support equipment testing of all Army and USMC Land Systems vehicles.

Item: LCS Mission Support Module Equipment Initiative

Request: \$1,000,000

Account: Research and Development, Navy

Line: 48

PE: 0603581N

Language: NA

Intended Recipient: Electromet Corporation

Address: Johnstown, PA

Purpose/Project Description: Requested funds will be used to provide a standardized shipboard mechanical connection for individual storage structures, which will be easily reconfigurable to support multiple LCS missions.

Item: Highly Integrated Production for Expediting RESET

Request: \$3,000,000

Account: Research and Development, Army

Line: 17

PE: 0602624A

Language: NA

Intended Recipient: Co-Exprise

Address: Wexford, PA

Purpose/Project Description: The requested funds will be used to integrate laser scanning technology to rapidly identify damaged, defective, or non-conforming weapon parts. The HIPER programs will also allow geographically separated employees to collaborate real-time to develop improvements during the RESET process saving time and money, and ensuring the quality of the military's small arms and crew-served weapons.

Item: Fragmentation Mitigation Capability Improvement

Request: \$2,000,000

Account: Research and Development, Army

Line: 185

PE: 0708045A

Intended Recipient: Nabco, Inc.

Address: Canonsburg, PA

Purpose/Project Description: The requested funding will be used to support a program at Picatinny Arsenal to develop enhanced fragmentation mitigation capabilities for explosives storage and containment vessels for use by military units that handle explosives and ammunition.

Item: Handheld Mobile Mapping Apparatus for Expedited Reporting (HAMMER)

Request: \$2,500,000

Account: Research and Development, Army

Line: 50

PE: 0603734A

Language: NA

Intended Recipient: Compass Systems Inc.

Address: Johnstown, PA

Purpose/Project Description: Funds would be used to provide a hand-held reconnaissance and surveillance instrument for geo-referencing sensor data into a common operating picture (COP).

Item: Advanced Hybrid Electric Drive

Request: \$4,000,000

Account: Research and Development, Navy

Line: 46

PE: 0603573N

Language: NA

Intended Recipient: Curtiss-Wright EMD

Address: Cheswick, PA

Purpose/Project Description: The requested funding would be used to design, manufacture and test an advanced hybrid drive propulsion system suitable for the DDG 51 Class ships Future Surface Combatant (FSC).

Item: Adaptive Diagnostic Electronic Portable Testset (ADEPT)

Request: \$4,000,000

Account: Research and Development, Navy

Line: 100

PE: 0604307N

Language: NA

Intended Recipient: Mikros Systems Corporation

Address: Fort Washington, PA

Purpose: Funding will be used to expand proven ADEPT capabilities to other Navy equipment and ship classes. ADEPT units provide a low-cost solution that automates radar and electronic system setup, testing, and adjustment processes, improving system support by shipboard technicians and reducing system downtime by 50 percent, thus improving overall system readiness. Primary benefits are cost-savings estimated at \$28 million per year as well as reduced manning requirements on Navy ships.

Item: Terrorism Threat Detection Research

Request: \$5,000,000

Account: Research and Development, Army

Line: 2

PE: 0601102A

Language: NA

Intended Recipient: Temple University

Address: Philadelphia, PA

Purpose/Project Description: The requested funding will couple the latest laser technologies with other state-of-the-art detection imaging technologies to develop a system capable of detecting chemical and biological agents at ranges up to 15 miles. Applications include stand-off detection of improvised explosive devices, chemical mapping of cities and remote terrains, detection of hidden bunkers, and weapons caches and stockpiles.

Item: Advanced Wireless Technologies

Request: \$2,500,000

Account: Research and Development, Army

Line: 36

PE: 0603008A

Language: NA

Intended Recipient: InterDigital Communications LLC

Address: King of Prussia, PA

Purpose/Project Description: The requested funding will be used to build on InterDigital's work with Army's CERDEC to develop an advanced digital wireless radio frequency chipset so that the military frequency can be accessed anywhere in the world by portable communications devices carried by the warfighter, allowing clear and secure communications with peers and commanders.

Item: Optimizing Aluminum Marine Structures

Request: \$5,000,000

Account: Research and Development, Navy

Line: 113

PE: 0604567N

Intended Recipient: Alcoa

Address: Alcoa Center, PA

Purpose/Project Description: The requested funding will be utilized to address the cost of fabrication, assembly, and joining of aluminum marine structures through advanced aluminum designs that will offer enhanced performance at a lower cost. Through cooperation with shipbuilders, prime contractors and Navy architects, Alcoa will educate the Navy and industry on advanced joining techniques, build model structures and pursue necessary materials qualifications.

Item: High Performance Light-Weight Body Armor Development Initiative

Request: \$2,800,000

Account: Research and Development, Army

Line: 79

PE: 0604601A

Language: NA

Intended Recipient: Morgan Advanced Materials and Technology

Address: St. Marys, Pennsylvania

Purpose/Project Description: This program seeks to address U.S. military requirements for improved ceramic armor systems for both body and vehicle armor.

Item: Fully Automated Software Integrated Robotic Precision Manufacturing

Request: \$3,000,000

Account: Research and Development, Navy

Line: 18

PE: 0603236N

Language: NA

Intended Recipient: MAGLEV, Inc.

Address: McKeesport, PA

Purpose/Project Description: Funding will be used to precision fabrication center to advance naval engineering and help develop processes for joining various materials for new generation ship hulls and components, thus ensuring a healthy US ability to develop innovative designs for Naval vessels. The program began under a joint agreement between the U.S. and Japan and has evolved into the drive for advancing stainless steel and composite stealthy ship hulls.

Item: High Speed Optical Interconnects
Request: \$3,000,000
Account: Research and Development, Defense Wide
Line: 10
PE: 0602303E
Language: NA

Intended Recipient: Lightwire

Address: Allentown, PA

Purpose/Project Description: Requested funds will be used to accelerate the development of high speed optical interconnects needed to enable the next generation of DOD computing needs.

Item: Chem-Bio Resistant Clothing
Request: \$2,400,000
Account: Research and Development, Defense Wide
Line: 14
PE: 0602384BP
Language: NA

Intended Recipient: Arkema Inc.

Address: King of Prussia, PA

Purpose/Project Description: The requested funding will be used to develop a chemical and biological protective clothing solution that outperforms the protective clothing ensembles which are currently in use by the DoD.

Item: Vanadium Safety Readiness Program
Request: \$3,000,000
Account: Defense Health Program
Line: NA
PE: NA
Language: NA

Intended Recipient: Bear Metallurgical Corp.

Address: Butler, PA

Purpose/Project Description: Funding would be used to conduct a study of the health and safety risks associated with the use of vanadium, which is currently used in many steel

applications because of its strength and light weight. Recent domestic and international regulatory opinions regarding the health risks of vanadium pentoxide, the most extensively used form of vanadium commercially, suggest that potential health risks associated with exposure to vanadium warrant further study.

Item: Photonic Integration Foundry
Request: \$3,000,000
Account: Research and Development, Navy
Line: 60
PE: 0603739N
Language: NA
Intended Recipient: CyOptics, Inc.
Address: Breinigsville, PA
Purpose/Project Description: Requested funds will be used to develop a photonics foundry prototyping and product realization capability to deliver turn-key photonic integrated circuit technologies for the next generation of Navy avionics platforms.

Item: Wearable Hemorrhagic Shock Monitor
Request: \$1,800,000
Account: Research and Development, Army
Line: 30
PE: 0603002A
Language: NA
Intended Recipient: BodyMedia, Inc.
Address: Pittsburgh, PA
Purpose/Project Description: Funds will be used to develop a wearable hemorrhagic shock monitor. Currently, medics are forced to rely on manual measurements of standard vitals that are taken through “snap-shot” measurements, including blood pressure, pulse, and respiration rate, which do not indicate trends in the physiological response to the injury. A system that can accurately monitor the complex physiological signals of a wounded soldier would significantly improve the ability of a medic to effectively prioritize and treat casualties.

Item: Small Manufacturers Defense Initiative, Rapid Prototyping for the Warfighter
Request: \$2,500,000
Account: Research and Development, Army
Line: 32
PE: 0603004A
Language: NA
Intended Recipient: Catalyst Connection
Address: Pittsburgh, PA

Purpose/Project Description: The Small Manufacturers Defense Initiative (SMDI) is a quick response manufacturing service supply chain protocol for the U.S. Army Armament Research, Development and Engineering Center (ARDEC) site in New Jersey. SMDI Phase I integrated many small and medium sized Pennsylvanian manufacturers into the ARDEC procurement system. Funding for Phase II will allow for the continued development and enhancement of the software and technology used in the procurement process. This funding will also provide for the SMDI system to be expanded to four other ARDEC sites and will allow for additional supplier qualification and technical assistance for Pennsylvanian manufacturers.

Item: Integrated Power System - Power Dense Harmonic Filter and Auxiliary Propulsion System Design

Request: \$3,500,000

Account: Research and Development, Navy

Line: 35

PE: 0603513N

Language: NA

Intended Recipient: Converteam, Inc.

Address: Pittsburgh, PA

Purpose/Project Description: The requested funding will be used for the test and evaluation of the baseline DDG-1000 ship passive harmonic filters and evaluation of an advanced auxiliary propulsion system. This new type of hybrid active/passive filter for shipboard power systems is able to greatly exceed the performance of a passive filter without the higher cost and weight associated with a purely active filter. The primary objective of this task is to enhance the performance of the DDG-1000 IPS by improving IPS power quality. Lessons learned through Converteam's Auxiliary Propulsion System, currently in service on LHD-8, will be used as the basis.

Item: Expeditionary Water Purification System

Request: \$3,000,000

Account: Research and Development, Army

Line: 33

PE: 0603005A

Language: NA

Intended Recipient: ALION Science & Technology

Address: Pittsburgh, PA

Purpose/Project Description: The requested funding would be used to develop a road mobile, air transportable system to provide up to 300,000 gallons per day of purified water, ranging from potable to ultra pure, de-ionized water, from sea water.

Item: Mission Critical Power System Reliability Surveys

Request: \$2,000,000
Account: Operations and Maintenance, Air Force
BA: 4
SA: 510
Language: NA

Intended Recipient: Eaton Corporation

Address: Moon Township, PA

Purpose/Project Description: The requested funds would be used to perform risk assessments of redundant power and related mission-critical infrastructure systems to identify system and equipment component weaknesses that may result in breach of operations, security, and other threats. Results and recommendations from the survey will serve as a basis to implement corrective actions needed to support mission-critical operations for the warfighter.

Item: Mismatch Repair Derived Antibody Medicines to Treat Staphylococcus-derived Bioweapons

Request: \$3,000,000

Account: Research and Development, Defense Wide

Line: 6

PE: 0601384BP

Language: NA

Intended Recipient: Morphotek Inc.

Address: Exton, PA

Purpose/Project Description: The requested funds would be used to develop fully human antibodies capable of preventing or reversing Staphylococcal Enterotoxins (SEB)-induced toxicity. SEB is a bacterial superantigen that can potentially be employed for biological warfare. Monoclonal Antibodies (MAbs) have proven to be potent anti-infective agents, but antibodies raised in animals have caused some undesirable allergic effects in humans due to reactions to foreign proteins. Human-raised antibodies could lead to safe vaccines and therapeutic strategies to combat the effects of an SEB bio-weapon. The next steps of this program are to perform all aspects of a drug development program leading to investigational new drug application with the FDA.

Item: Domestic Production of Nanodiamond for Military and Commercial Applications

Request: \$3,000,000

Account: Research and Development, Army

Line: 149

PE: 0605805A

Language: NA

Intended Recipient: NanoBlox Inc.

Address: University Park, PA

Purpose/Project Description: Requested funds will be used to establish a domestic production source for nanodiamond material for military and commercial applications, including ballistics, lubrication, Teflon replacement, lightweight armor and fuel efficiency.

Item: Rural Healthcare – Center of Excellence for Remote and Medically Underserved Areas (CERMUSA)

Request: \$3,000,000

Account: Research and Development, Army

Line: 30

PE: 0603002A

Language: NA

Intended Recipient: Saint Francis University’s Center of Excellence for Remote and Medically Under-Served Areas (CERMUSA)

Address: Loretto, PA

Purpose/Project Description: Requested funds would be used to research, innovate, and facilitate the application of technology solutions, products, and other related services that enable and enhance accessible, sustainable, affordable, high-quality healthcare and medical education to remote and underserved communities and military personnel.

Item: Early Responder Distance Learning Center (ERDLC)

Request: \$1,250,000

Account: Research and Development, Defense Wide

Line: 26

PE: 0603122D8Z

Language: NA

Intended Recipient: Saint Joseph’s University

Address: Philadelphia, PA

Purpose/Project Description: The requested funding will be used to provide training content to military, emergency response and other personnel on how to interact with indigenous populations via a network that utilizes secure, mobile devices. The secure mobile training delivery system developed under this project will provide operational forces, military and civilian first responders with an enhanced ability to interact with local populations.

Item: Micro Inertial Navigation Unit Technology

Request: \$3,000,000

Account: Research and Development, Army

Line: 32

PE: 0603004A

Intended Recipient: Virtus Advanced Sensors

Address: Pittsburgh, PA

Purpose/Project Description: Requested funds would support the development of a single chip, 6-axis Micro Electro-Mechanical Systems (MEMS) Inertial Navigation Unit (INU), which would significantly advance the performance and possible applications of inertial sensor technology at a reduced cost and weight. This new system would integrate GPS technology and the inertial navigation functions, enabling navigation and tracking effectively and accurately in all environments, including regions where GPS is unavailable due to terrain masking, enemy jamming or other environmental factors.

Item: Hot Isostatic Processing (HIP)
Request: \$5,250,000
Account: Defense Production Act Purchases
BA: 1
SA: NA
Language: NA

Intended Recipient: ATI Powder Metals

Address: Oakdale, PA

Purpose/Project Description: Funding will be used to develop a very large diameter hot isostatic press (HIP) to maintain US leadership in the global market while providing the capability to manufacture large critical components for the military and industrial base. HIP produces near-net shape components, usually with properties equivalent to forgings, thereby reducing costly machining and recycling of expensive materials. It can produce a broad range of part sizes and often extends the life cycle of these components.

Item: Smart Oil Sensor
Request: \$3,800,000
Account: Research and Development, Army
Line: 13
PE: 0602601A
Language: NA

Intended Recipient: Impact Technologies

Address: State College, PA

Purpose/Project Description: The requested funding would be used to develop an engine lubricant quality sensor for application in ground vehicles, wheeled and tracked, all of which have a requirement for an oil condition sensor. The sensor will provide a detailed, real-time evaluation of engine oil health state as well as the identification and quantification of many of the primary internal combustion engine lubricant failure modes, eliminating the need to change oil based on inherently conservative mileage estimates.

Item: Hybrid Ultracapacitor for Marine Combat Vehicle
Request: \$3,000,000

Account: Research and Development, Navy
Line: 52
PE: 0603635M
Language: NA
Intended Recipient: Axion Power International, Inc
Address: New Castle, PA

Purpose/Project Description: Requested funds would be used for the development and demonstration of a new power source that merges the best qualities of a battery with those of a supercapacitor. The hybrid capacitor supercell will allow the military to replace the heavy, lead acid battery in their vehicles with a new, more reliable and less temperature-dependant energy source that is 25-40 percent lighter. A significant cost savings will also be achieved as a result of this technology effort, and will provide a more environmentally friendly technology which uses 60 percent less lead than typical lead acid batteries.

Item: High Temperature Polymer Nanocomposites for Advanced Aerospace Missions
Request: \$3,000,000
Account: Research and Development, Air Force
Line: 27
PE: 0603680F
Language: NA
Intended Recipient: Paramount Industries, Inc.
Address: Langhorne, PA

Purpose/Project Description: The purpose of this funding will be to develop additive manufacturing technologies that will meet military requirements for the production of complex parts with high temperature and low observance requirements for the next generation of military aircraft through the use of High Temperature Laser Sintering (HT-LS) materials, machines and processes. Additive manufacturing of nanocomposites will have a direct impact on the next generation of aerospace defense platforms by decreasing part lead times and cost and improving payload and detection characteristics.

Item: AN/ALQ-99 Band 5/6 TWT Replacement Module Assembly (TRMA)
Request: \$5,000,000
Account: Aircraft Procurement, Navy
BA: 5
SA: 29
Language: NA
Intended Recipient: Cobham Sensor Systems - Lansdale
Address: Lansdale, PA

Purpose/Project Description: The requested funds would be used to procure solid-state amplifier modules for the Band 5/6 Transmitter on U. S. Navy and Marine Corp EA-6B Prowler and U.S. Navy EA-18G Growler Aircraft, which is part of the ALQ-99 Tactical Jamming System

(TJS). Current Band 5/6 transmitters utilize older Traveling Wave Tube (TWT), which are not as efficient, reliable or available as today's modern and more robust solid state amplifiers in transmitting jamming signals.

Item: Expedient Variable-pitch Propulsion Shaft Refurbishment Research

Request: \$2,400,000

Account: Research and Development, Navy

Line: 221

PE: 0708011N

Language: NA

Intended Recipient: Rhoads Industries, Inc.

Address: Philadelphia, PA

Purpose/Project Description: Requested funds will be used to test and validate a new welding procedure to expedite the repair of variable-pitch propulsion shafts. The new technique holds the potential to cut the wait time by two-thirds and the cost of the repair by half. The new technique involves machining the damaged areas of the copper/nickel bronze shaft bearing sleeve, applying a circumferential weldment, and machining the sleeve back to the original specifications.

Item: Optical Systems Technology

Request: \$3,000,000

Account: Defense Procurement Act Purchases

Line: 1

PE: NA

Language: NA

Intended Recipient: Optical Systems Technology, Inc.

Address: Freeport, PA

Purpose/Project Description: Requested funds will be used to establish high-volume production capability for multi-spectral optics, and thereby provide the U.S. military with a domestic source for critical optics.

Item: Heavy Fuel Engine for UAVs

Request: \$3,000,000

Account: Research and Development, Army

Line: 181

PE: 0305233A

Language: NA

Intended Recipient: Lycoming Engines

Address: Williamsport, PA

Purpose/Project Description: A Heavy Fuel Engine would reduce the time between overhaul of the current Shadow Tactical Unmanned Aircraft System engine, save money on maintenance costs, and increase the reliability of the Shadow TUAS, which provides direct ISR support to the war fighter in Iraq and Afghanistan.

Item: National Guard Bureau J-3 Civil Support Team Implementation Assistance

Request: \$2,500,000

Account: Operations and Maintenance, Army National Guard

BA: 01

Line: 121

Language: NA

Intended Recipient: Pennsylvania National Guard

Address: Annville, PA

Purpose/Project Description: Requested funds will be used to provide enhanced communications capability for the National Guard Bureau. Additionally, it will serve as the key integrator for additional capabilities and will be a component of the interoperability solution with follow-on forces and first responder communities.

Item: Collaborative Brain Injury Biomarkers Development Network

Request: \$1,980,000

Account: Research and Development, Army

Line: 30

PE: 0603002A

Language: NA

Intended Recipient: University of Pittsburgh Medical Center

Address: Pittsburgh, PA

Purpose/Project Description: Requested funds would be used to research the utility of biomarkers to identify patients at risk for a number of post traumatic complications, including seizures and depression. The aim is to develop new acute and chronic biomarkers through state of the art analytical approaches, test their prognostic and therapeutic guidance potential, understand their mechanistic role in the neurobiology of experimental TBI and TBI complications/treatments, develop clinical care assays, and implement them throughout the continuum of care.

Item: Combat Related Intermittent Explosive Disorder Treatment

Request: \$2,200,000

Account: Research and Development, Army

Line: 28

PE: 0602787A

Language: NA

Intended Recipient: Azevan Pharmaceuticals, Inc.

Address: Bethlehem, PA

Purpose/Project Description: Requested funds will be used to research the use of new treatments for the treatment of depressive anxiety disorders to improve the lives of military personnel and their families, addressing a critical unmet medical need and reducing the overall cost of care for veterans suffering from mental health problems.

Item: Lightweight Battery Driven and Battlefield Deployment Ready NG Feeding Tube Cleaner

Request: \$1,300,000

Account: Research and Development, Army

Line: 30

PE: 0603002A

Language: NA

Intended Recipient: Piezo Resonance Innovations

Address: Bellafonte, PA

Purpose/Project Description: Requested funds would be used to continue testing and validation of a device to perform feeding tube cleaning in combat settings. Injured soldiers are often treated with Nasogastric (NG) feeding tubes until they can swallow again, clogging of feeding tubes is a serious problem.

Item: Classified Waste Destruction

Request: \$5,000,000

Account: Operations and Maintenance, Army

BA: 1

Line: 100

Language: NA

Intended Recipient: Kusters Engineering

Address: Johnstown, PA

Purpose/Project Description: Requested funds would be used to implement NSA-certified technology to prevent unwanted dissemination of classified material.

Item: Next Generation Line Haul Tractor Demonstration and Evaluation

Request: \$3,000,000

Account: Research and Development, Army

Line: 33

PE: 0603005A

Language: NA

Intended Recipient: U.S. Army National Automotive Center

Location: Warren, MI

Purpose/Project Description: Requested funds will be used to enable the Army to do a cost benefit analysis to determine whether it is more cost effective to purchase new Line Haul Tractors or to modify existing ones.

Item: Dual Mode Laser Guided Bomb
Request: \$5,000,000
Account: Procurement of Ammunition, Air Force
Line: 5
PE: NA
Language: NA
Intended Recipient: Lockheed Martin M&FC Archbald
Location: Archbald, PA

Purpose/Project Description: Requested funds will be used to update Paveway II Laser Guided Bombs with an Inertial Navigation System/Global Positioning System (INS/GPS) that provides dual-mode guidance capability.

Item: Metals Affordability Initiative
Request: Support the President's Budget
Account: Research and Development, Air Force
Line: 15
PE: 0603122F
Language: NA

Intended Recipient: Brush Wellman
Location: Mayfield Heights, OH

Purpose/Project Description: This project provides innovation, rapid development and implementation of new metals technology used in over 50 military systems.

Item: Bradley Program Modifications
Request: \$159,500,000
Account: Weapons and Tracked Combat Vehicles, Army
Line: 2
PE: NA
Language: NA

Intended Recipient: BAE Systems
Location: York, PA

Purpose/Project Description: The requested funds would be used to procure and field 120 ODS-SA vehicles to the 55th Brigade, Pennsylvania Army National Guard. The Army modernization plan provided for 20 Brigade sets of M1A2 tanks and M2A3 Bradley Vehicle in digitized brigades and 11 M1A1-AIM / M2A2-ODS analog brigades. These upgrades are necessary to allow the 55th Brigade to integrate into formations.

Item: M88A2 Heavy Recovery Vehicle
Request: \$55,000,000
Account: Weapons and Tracked Combat Vehicles
Line: 2061
PE: NA
Language: NA
Intended Recipient: BAE Systems
Location: York, PA

Purpose/Project Description: The requested funds would be used to procure 23 M88A2 armored recovery vehicles, which are used by the Army and Marine Corps to recover combat-disabled track/wheeled vehicles. This request supports the USMC unfunded requirement for 23 vehicles.

Item: High Speed Power Node Switching and Power Node Control Centers
Request: 5,000,000
Account: Research and Development, Navy
Line: 46
PE: 0603573N

Intended Recipient: L-3 SPD Electrical Systems

Address: Philadelphia, PA

Purpose: Requested funds will be used to facilitate the installation of Power Node Control Centers (PNCC) on U.S. Navy Ship Modernization, Re-Start and New Construction Programs as well as to continue enhanced development of the High Speed Power Node Switching and PNCC's for US Navy ships. The systems combine the functions of previous legacy systems while providing a safer, more reliable, cost effective and robust power system.